

A new species of the *Tachys ectromoides*-group from Western Australia

(Coleoptera, Carabidae, Bembidiinae)*

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Tachys marri, spec. nov. is newly described. It belongs to the *Tachys ectromoides*-group of Darlington and is the first representative of this outstanding group from Western Australia. Additional records of *T. ectromoides* Sloane and *T. bolellus* Darlington are also presented.

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Introduction

The Australian Tachyine beetle fauna is rather diverse and the relationships of several species and species-groups are not well understood. In addition to several rather homogenous and mostly revised units including *Pericompsus* (Erwin 1974), *Elaphropus* (Baehr 1987), *Tachyta* (Baehr 1986), *Tasmanitachoides* (Baehr in press), and *Paratachys*, there are many unique species or groups which cannot be associated thus far with other groups. One is the so-called *ectromoides*-group (Darlington 1962), named after the outstanding *Tachys ectromoides* Sloane and so far including two other species, *T. bolus* Darlington and *T. bolellus* Darlington. In appearance as well as in habits the group is rather unusual within *Tachys* and their habits are perhaps the reason for the rarity of all species. They look either like Trechines (*T. bolus* and *T. bolellus*), or rather like a small Lebiine or Tetragonoderine (the vividly coloured *T. ectromoides*). According to Darlington (1962), the species are mostly found under debris and soil in damp situations in forests, which is a Trechine habitat rather than a Tachyine.

Most important characters of the *ectromoides*-group are: reticulate microsculpture, ocellate mentum, entire labial tooth, wide base of pronotum with distinct submarginal carina, presence of 8th elytral stria which is punctate throughout, complete striation of elytra, strong recurrent stria, curved inwards to meet apex of 3rd stria, inconspicuous or even wanting punctures of 3rd stria.

Although *T. ectromoides* was firstly described from south-western Australia, this locality was probably erroneous (Sloane 1898, Darlington 1962) and the known species occur probably only in south-eastern Australia. During a travel through south-western Australia I had the opportunity to collect a new species which belongs presumably to the *ectromoides*-group and is described below.

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Abbreviations of collections used in text

- ANIC – Australian National Insect Collection, Canberra
CBM – Collection M. Baehr, München
ZSM – Zoologische Staatssammlung, München

Measurements

Measurements were made under a stereomicroscope, using an ocular micrometer. Length has been measured from apex of labrum to tip of elytra.

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Recognition

Key to species of *ectromoides*-group, partly adapted from Darlington (1962).

1. Elytra with pattern. Dorsal elytral punctures present 2.
– Elytra unicolorous. Dorsal elytral punctures absent 3.
2. Elytra yellow with wide brown fascia and piceous apex. Antennae yellow throughout. Pronotum very wide, base almost as wide as middle. Surface strongly reticulate. Eastern Australia . . . *ectromoides* Sloane
– Elytra piceous with indistinct lighter spots at shoulders and in last third. Antennae piceous with 1st, 2nd, and base of 3rd segments yellow. Pronotum evidently narrowed to base. Surface almost smooth, nitid. South-western Australia *marri*, spec. nov.
3. Larger species, 3.2–3.6 mm long. Head and pronotum rufous, elytra piceous. New South Wales
. *bolus* Darlington
– Smaller species, 2.6–2.9 mm long. Wholly castaneous or light piceous. New South Wales
. *bolellus* Darlington

Tachys marri, spec. nov.

(Figs 1–3)

Types. Holotype: ♂, Western Australia, Serpentine Dam, 5 km S. of Jarrahdale, 16. XI. 1987, M. Baehr (ANIC).
– Paratypes: 2 ♀♀, same data (CBM, ZSM); 1 ♀, Western Australia, Chittering Valley, 35 km W. of Toodyay, 18. XI. 1987, M. Baehr (CBM).

Type locality: Serpentine Dam S. of Jarrahdale, south-western Australia.

Diagnosis. With technical characters of *T. ectromoides*-group, distinguished from other species either by shape of elytral pattern or presence of dorsal elytral punctures.

Description

Measurements. Length: 3–3.2 mm; width: 1.25–1.35 mm; ratio width/length of pronotum: 1.46–1.48; ratio width of base/apex of pronotum: 1.32–1.35.

Colour. Piceous to almost black. Lateral border of pronotum narrowly and indistinctly reddish. A transverse spot at last quarter of elytra yellowish, in some specimens rather indistinct. Also shoulders vaguely lighter. Labrum and mandibles reddish, palpi piceous, antennae piceous, 1st, 2nd, and base of 3rd segment reddish.

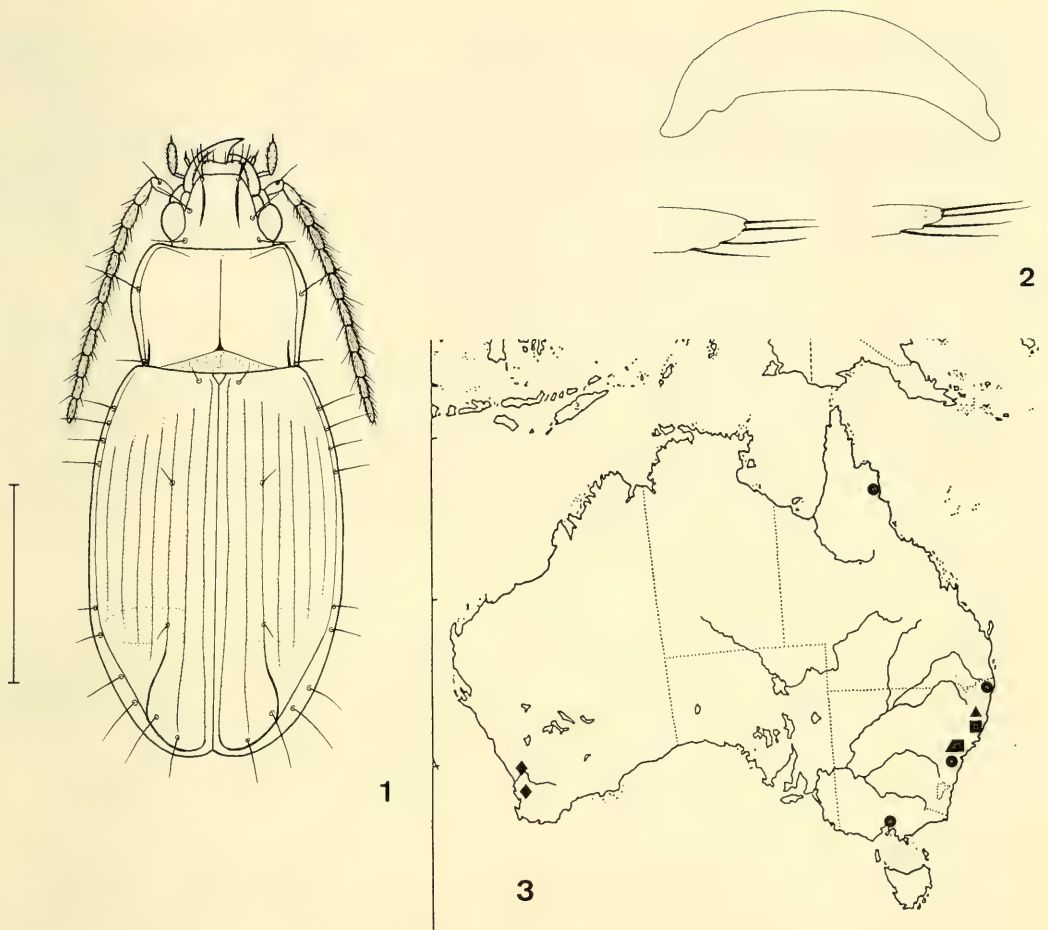


Fig. 1. *Tachys marri*, spec. nov. ♂ holotype. Scale: 1 mm.

Fig. 2. *Tachys marri*, spec. nov. ♂ genitalia.

Fig. 3. Distribution of *Tachys ectromoides* Sloane: ●; *T. bolus* Darlington: ■; *T. bolellus* Darlington: ▲, and *T. marri*, spec. nov.: ◆.

Head. Rather wide. Eyes large, protruding, with short orbits. Temporal furrows shallow, not prolonged onto clypeus. Mandibles short. Mentum bifoveate, tooth present, slightly excised at apex. Antennae medium-sized, surpassing base of pronotum by about two segments. Median segments 1.5× as long as wide. Surface of head nitid, though covered with rather isodiametric, inconspicuous meshes.

Pronotum. Rather short and wide. Anterior angles slightly produced, though rounded off, strongly curved inwards. Apex shallowly sinuate. Pronotum widest slightly behind lateral setae, then strongly narrowed to base, almost in a straight line. Posterior angles about right, sometimes very slightly produced. Base wide, lateral parts slightly oblique, but not excised. Anterior angles bordered far inwards, lateral channel deep and wide, base unbordered. Anterior transverse furrow rather distinct, median line almost attaining apex and base, transverse prebasal sulcus deep, straight, linear, narrowly interrupted in middle. Submarginal carinae distinct, elongate, almost parallel. Basal grooves shallow. Microsculpture present only medially at apex and basally behind the prebasal sulcus, rather isodiametric. Surface smooth, nitid, with scattered, extremely fine punctures, visible only at 50× magnification.

Elytra. Elongate, almost parallel, depressed. Shoulders rounded, with a tiny denticle, where lateral border ends, not bordered at base. Lateral channel fairly deep. Scutellar stria very inconspicuous, almost wanting, situated in 1st interval. Striae complete, though outer striae very fine. All striae conspicuously punctate, but not much impressed. Intervals anteriorly slightly convex, posteriorly completely depressed. 8th stria punctate throughout, attaining last puncture of anterior marginal group. Recurrent stria deep, with a strong ridge behind, posteriorly very near to lateral border, then abruptly curved inwards to meet the end of 3rd stria. Two dorsal punctures within 3rd stria, both quite distinct, the anterior puncture in 1st third of stria, the posterior near anterior border of posterior elytral macula. Microsculpture consisting of slightly transverse, rather coarse meshes, which are, however, rather superficial. Therefore elytra quite nitid. Winged.

Lower surface. Proepisternum distinctly, abdomen less strongly microreticulate. Metepisternum elongate. ♂ with one, ♀ with two setae on last abdominal segment.

Legs. Basal segments of ♂ anterior tarsus widened and clothed.

♂ genitalia. Aedeagus short and convex, apex blunt. Inner sac with short, sclerotized tooth (in ♂ holotype everted). Parameres see fig. 2.

Variation. Colour and distinctiveness of pattern varies somewhat for different age of specimens. Also relative width of pronotum and shape of posterior angles varies slightly.

Distribution. Southwestern corner of Western Australia.

Material examined. Only the type series.

Habits. All specimens caught under bark of Marri (*Eucalyptus calophylla*) within mixed Jarrah-Marri-forest, while looking for Lebiines and Pseudomorphae. One specimen immature, two others perhaps not fully coloured. These habits are very similar to those of the Australian (and exotic) *Tachyta*-species which have been not yet recorded from south-western Australia. The depressed body shape (common also to *T. ectromoides*) corresponds well with this mode of life.

Derivation of name. From the Marri eucalypt, the aboriginal name for the eucalypt species they live on.

Remarks

T. marri, spec. nov. is well distinguished from the other species of the *ectromoides*-group by pattern, shape of pronotum, degree of microsculpture, and presence of dorsal elytral punctures. Within this group certainly *T. bolus* and *T. bolellus* are most closely related and most derived species, while *T. ectromoides* and *T. marri* are in several characters more primitive. The habits of all species, however, are rather unusual for the genus *Tachys*, either if they live in forest litter or under the bark of trees.

New records of other species

Tachys ectromoides Sloane

(Fig. 3)

Sloane, 1896, p. 359

Sloane 1898, p. 477; 1921, p. 198, 204

Darlington 1962, p. 124

Moore 1987, p. 138

This rare species was first described from Donnybrook, south-western Australia (Sloane 1896). Later on, Sloane (1898), as well as Darlington (1962) expressed doubt on this locality, as all, though rare, later records were from south-eastern Australia. Actually, the habits are totally unknown (Sloane 1896, 1898, 1921), although Darlington (1962) suspected that the species lives in litter or rotten wood on the forest floor, away from open water. The following new record extends the range considerably

to northern Queensland, where the single specimen was found at light at the edge of mountain rain forest. Actually, it might live either on the ground in litter or, perhaps more probably, on or under the bark of trees (as discussed under *T. marri*, see above). This is suggested by the depressed, wide body and the pattern which is typical for bark inhabiting carabids.

1 ♀, Boulder Creek, 12 km N. of Mossman, Windsor Tableland, 8.I.1982, at light, M. Baehr (CBM).

Tachys bolellus Darlington
(Fig. 3)

Darlington, 1962, p. 127

Moore 1987, p. 138

A trechine-like species, thus far recorded only from the type locality near Barrington Tops, new South Wales (Darlington 1962). Apparently also a very rare species, perhaps due to its habits. My single specimen was found under a log in temperate upland rain forest.

1 ♀, Point Lookout near Ebor, c. 1 400 m, 28.I.1982, M. Baehr (CBM).

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